



**CONESTOGA-ROVERS
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July 10, 2012

Reference No. 056393

Mr. Michael Berkoff
Remedial Project Manager
U.S. Environmental Protection Agency - Region V
Superfund Division, Remedial Response Section #2
77 West Jackson Boulevard (SR-6J)
Chicago, IL 60604-3590



Dear Mr. Berkoff:

Re: Remedial Action Quarterly Progress Report No. 24 - Second Quarter 2012
12th Street Landfill Operable Unit No. 4
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Allegan and Kalamazoo County

As required by Task 4, Progress Reports and the Statement of Work for the Remedial Design and Remedial Action at the 12th Street Landfill Operable Unit No. 4, please find attached the Progress Report No. 23 for the period of April 1, 2012 through June 30, 2012.

Should you have any questions or require any additional information, please do not hesitate to contact the undersigned.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Gregory A. Carli, P. E.

GAC/cs/13

cc: J. Saric (USEPA)
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**REMEDIAL ACTION PROGRESS REPORT NO. 24
APRIL 1, 2012 TO JUNE 30, 2012**

**REMEDIAL DESIGN AND REMEDIAL ACTION
12TH STREET LANDFILL, OPERABLE UNIT NO. 4
OTSEGO, MICHIGAN**

This progress report is being submitted to the United States Environmental Protection Agency (USEPA) in accordance with Task 4: Progress Reports and the Summary of Major Deliverables/Schedule contained in the Statement of Work for the Remedial Design and Remedial Action pursuant to the terms of the Consent Decree for the Design and Implementation of Certain Response Action at Operable Unit No. 4 and the Plainwell, Inc. Mill Property (Site) of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Consent Decree) which became effective February 22, 2005.

1. WORK PERFORMED

- On April 10, 2012, Progress Report No. 23 was submitted to the USEPA.
- On April 10, 2012 a memorandum summarizing the February 2012 groundwater sampling event was submitted to USEPA.
- The following monitoring and maintenance activities were performed during the Second Quarter 2012:
 - Completed a total of six static water level sampling events in the 2 weeks preceding the Quarterly Monitoring Event (April 2012)
 - Completed the second Quarterly Monitoring Event, as described in the Operations, Maintenance, and Monitoring Plan (OMMP), dated May 9, 2011; this included the sampling of three gas probes, collecting water level readings from one river staff gauge, and sampling fourteen groundwater monitoring wells
 - Completed the addition of new locks to the gas probes on April 30, 2012
 - Completed spring repairs at the Site, consisting of filling in animal burrows, covering exposed geotextile with erosion control blankets, and reseeding bare areas with annual rye

2. DATA RECEIVED

- Semi-Annual Monitoring Event Data (February 2012) quality assurance/quality control (QA/QC) review and validation was completed (Appendix A).
- Quarterly Monitoring Event Data (April 2012) was received and is undergoing quality assurance/quality control (QA/QC) review and validation.

**REMEDIAL ACTION PROGRESS REPORT NO. 24
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**3. MODIFICATIONS TO WORK PLANS OR OTHER SCHEDULES
PROPOSED TO OR APPROVED BY THE USEPA**

- Submittal of the Revised OM&M Plan to the USEPA on April 18, 2012
- Submittal of a work plan proposing additional landfill gas data collection to USEPA on May 8, 2012
- Submittal of a memorandum proposing permanent marker language to USEPA on May 9, 2012

4. PROBLEMS ENCOUNTERED AND PLANNED RESOLUTION

- None

5. WORK ANTICIPATED DURING THE NEXT REPORTING PERIOD

- Submittal of the April 2012 Semi-Annual Monitoring Event Data Summary Report
- July 2012 Quarterly Groundwater Sampling Event and Inspections
- Additional landfill gas sampling is scheduled to be performed during Third Quarter 2012 pending USEPA approval of the May 8, 2012 work plan

6. ANTICIPATED DEVELOPMENT WITH WORK DURING THE NEXT PERIOD

- None

7. OTHER RELEVANT INFORMATION

- None



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MEMORANDUM

TO: Greg Carli
FROM: Ruth L. Mickle/ah/6/Det
RE: Data Quality Assessment and Full Validation
Groundwater Monitoring-February 2012
12th Street Landfill, Otsego Township, Michigan

REF. NO.: 56393
DATE: June 14, 2012

The following details a quality assessment and validation of the analytical data resulting from the February 2012, collection of 15 water samples, and four (4) quality control samples from the 12th Street Landfill Site in Otsego Township, Michigan. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Columbia Analytical Services in Kelso, Washington (CAS) in accordance with the methodologies presented in Table 2.

The quality control criteria used to assess the data were established by the methods and the quality assurance project plan (QAPP). Application of quality assurance criteria was consistent with following guidance documents:

- i. "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999; and
- ii. "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA-540/R-94/013, February 1994.

These guidelines are collectively referred to as "NFGs" in this Memorandum.

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), polychlorinated biphenyls (PCB), and inorganics below the laboratory's report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J". These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum.

Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are presented in Table 2.

The majority of samples were prepared and/or analyzed within the specified holding time periods.

Sample Preservation and Holding Times (continued)

Table 3 identifies the samples that were received at the lab past the holding time for hexavalent chromium analysis. As a result, the hexavalent chromium data for the samples listed in Table 3 were qualified as estimated (UJ).

The samples were shipped and maintained in accordance with the sample preservation requirements.

Gas Chromatography/Mass Spectrometer (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check) – Organic Analyses

To ensure adequate mass resolution, identification, and to some degree, sensitivity; the performance of each GC/MS instrument used for VOC and SVOC analysis was checked at the beginning of each 12-hour period. The resulting spectra must meet the criteria cited in the NFGs before initiating an analysis sequence.

Instrument performance check data were reviewed. These tuning compounds were analyzed at the required frequency throughout the VOC and SVOC analysis. The results of all instrument performance checks were within the acceptance criteria, indicating acceptable instrument performance.

Initial Calibration – Organic Analyses

Initial calibration data are used to demonstrate that each instrument is capable of generating acceptable quantitative data. A five point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each over a specific concentration range.

Initial calibration criteria for organic analyses are evaluated against the following criteria:

- i. GC/MS (all compounds) – must meet a minimum mean relative response factor (RRF) of 0.05 ;
- ii. GC/MS (all compounds) – the percent relative standard deviation (RSD) values must not exceed 30.0 percent or a minimum coefficient of determination of 0.99 if quadratic equation calibration curves are used; and
- iii. GC (all compounds using an average for multi-response compounds) – the percent RSD must not exceed 20 percent or a correlation coefficient of 0.995 when linear regression calibration curves are used.

Calibration standards were analyzed at the required frequency and the results met the above criteria for linearity and sensitivity with the exception of the qualified samples presented in Table 4.

Continuing Calibration – Organic Analyses

To ensure that each instrument was capable of producing acceptable quantitative data over the analysis period, continuing calibration standards must be analyzed every 12 hours for GC/MS analyses. The following criteria are employed to evaluate the continuing calibration data:

- i. GC/MS (all compounds) – must meet a minimum mean RRF of 0.05 ;
- ii. GC/MS (all compounds) – the percent difference between the mean initial calibration RRF and the continuing calibration RRF must not exceed 25 percent; and

Continuing Calibration – Organic Analyses (Continued)

- iii. GC/MS (compounds determined by quadratic curve) – the percent drift between the true value and the continuing calibration value must not exceed 25 percent;
- iv. GC (all compounds using average for multi-response compounds) – the percent difference between mean initial calibration factor and the continuing calibration factor must not exceed 15 percent; and
- v. GC (compounds determined by linear regression) – the percent drift between the true value and the continuing calibration value must not exceed 15 percent.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response and sensitivity with the exception of the qualified samples presented in Table 5.

Inductively Coupled Plasma/Mass Spectrometer (ICP/MS) –
Mass Calibration and Resolution Checks – Metal Analyses

To ensure adequate mass resolution, identification, and to some degree, sensitivity; the performance of each ICP/MS instrument used for metals analyses was checked prior to calibration before initiating an analysis sequence through the analysis of a tuning solution. The results of the tuning solution analysis were reviewed against the following criteria:

- i. Analyze tuning solution a minimum of four times with a percent RSD of less than or equal to five for the analytes contained in the tuning solution; and
- ii. The mass resolution must be within 0.1 amu of the true value over the analytical range

Instrument performance check data were reviewed. The tuning solution was analyzed at the required frequency throughout the analyses. The results of all instrument performance checks were within the acceptance criteria, indicating acceptable instrument performance.

Initial Calibration – Inorganic Analyses

The initial calibration includes a blank and at least one standard for inductively coupled plasma (ICP) to establish the analytical curve. Mercury analysis by cold vapor atomic absorption spectroscopy (CVAA) and cyanide analysis by spectrophotometry requires the analysis of a calibration blank and a minimum of five standards to establish the calibration curve. The coefficient of variation for calibration curves must exceed 0.995.

Initial calibration is verified with an initial calibration verification (ICV) standard which must recover within 90 to 110 percent for metals by ICP, 80 to 120 percent for mercury by CVAA and 85 to 115 percent for cyanide by spectrophotometry.

A review of the laboratory data showed that the inorganic initial calibration curves and ICVs were analyzed at the appropriate frequency and were within the acceptance criteria.

Continuing Calibration – Inorganic Analyses

Continuing calibration verification (CCV) standards are analyzed at method specified frequency (one every 10 samples). The CCVs must meet the percent recovery control limits specified above for the ICVs. Criteria for inorganic analyses are the same criteria as used for assessing the initial calibration data.

A review of the laboratory data showed that CCVs were analyzed at the appropriate frequency and the data were within the acceptance criteria.

Method Blank Samples

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

The samples presented in Table 6 should be qualified due to laboratory contamination. The remaining method blank samples did not contain target compounds with concentrations that impacted the investigative samples.

Laboratory Blank Samples – Inorganic Analyses

Metals analyses include the analysis of initial calibration blanks (ICB) and continuing calibration blanks (CCB) to assess the presence and the magnitude of sample contamination introduced during sample analysis. The CCBs are analyzed at a minimum frequency of one every 10 samples and target analytes should be non-detect.

Several ICB and CCBs were reported with detectable concentrations of target analytes. Table 7 identifies samples that should be qualified due to calibration blank contamination. The remaining ICB and CCBs did not contain elements with concentrations that impacted the investigative samples.

Surrogate Compounds – Organic Analyses

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

The surrogate recovery acceptance criteria were met for all samples that could be evaluated.

Matrix Spike/Matrix Spike Duplicate Analyses

To assess the long term accuracy and precision of the analytical methods on various matrices, matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the relative percent difference (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The inorganic control limits are defined by the methods or the laboratory and the NFG. The samples selected for MS/MSD analysis are identified in Table 1.

The MS/MSD percent recoveries and associated RPD acceptance criteria were met.

Laboratory Control Sample/Laboratory Control Duplicate Analyses

The laboratory control sample (LCS) and/or laboratory control duplicate (LCD) analyses serve as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS/LCD percent recoveries were evaluated against method and laboratory established control limits.

The LCS/LCD percent recoveries were within the laboratory control limits or did not warrant qualification, indicating that an acceptable level of overall performance was achieved with the exception of the qualified samples presented in Table 8.

Laboratory precision was verified by the relative percent difference (RPD) of the LCS/LCD when a matrix spike/matrix spike duplicate was not analyzed.

The RPDs were within the laboratory control limits, indicating that an acceptable level of overall laboratory precision was achieved.

Inductively Coupled Plasma (ICP) Interference Check Sample Analysis – Inorganic Analyses

To verify that proper inter-element and background correction factors had been established by the laboratory for metals analyses, the ICP interference check samples (ICS) are analyzed. The ICSs are evaluated against recovery control limits of 80 to 120 percent.

The ICS analysis results were evaluated for all samples and were within the control limits.

Internal Standard Summaries – Organic Analyses

To correct for variability in the GC/MS response and sensitivity, internal standard (IS) compounds are added to all samples. All results are calculated as a ratio of the compound and associated IS response. Overall instrument stability and performance for VOC analysis was monitored using IS peak area and retention time (RT) data. The IS peak areas and RTs of the samples are required to meet the following criteria:

- i. IS area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated continuing calibration standard IS area counts; and
- ii. The RT of the IS must not vary by more than plus or minus 30 seconds from the associated continuing calibration standard.

A review of the VOC and SVOC internal standard data showed that the IS area counts and retention time data were within the acceptance criteria with the exception of the qualified samples presented in Table 9.

Internal Standard Summaries – Inorganic Analyses

To correct for variability in the ICP/MS response and sensitivity, internal standards (IS) are added to all samples. All results are calculated as a ratio of the IS response to the response of the sample.

Internal Standard Summaries – Inorganic Analyses (continued)

Overall instrument stability and performance for metals analyses was monitored using the IS intensity data which are evaluated against the following criteria:

- i. The IS intensities in samples must recover between 30 and 120 percent of the true value; and
- ii. The IS intensities in instrument calibration checks (CCVs and CCBs) must recover between 60 and 125 percent of the true value.

A review of the ICP/MS metals IS data showed that the IS intensities were within the acceptance criteria.

Serial Dilution – Inorganic Analyses

The percent difference (D) between a serial dilution of a sample for each matrix was monitored to determine physical or chemical interference. A minimum of one sample per 20 investigative samples is analyzed at a five-fold dilution. The serial dilution results must agree within 10 percent D of the original results for samples with detected concentrations greater than 50 times the instrument detection limit.

The percent D acceptance criteria was met.

Duplicate Sample Analyses – Inorganic Analyses

The laboratory precision of matrix-specific metals methods was monitored by the analyses of duplicate samples.

The duplicate relative percent difference (RPD), were within the acceptance criteria.

Post Digestion Spike Analyses – Inorganic Analyses

At least one spiked (pre-digestion) sample is prepared and analyzed for each analytical batch of metals. When the pre-digestion spike recovery falls outside of the control limits and the sample result is greater than four times the spike added, a post digestion spike is performed for those analytes that do not meet the specified criteria.

The post digestion spike results were evaluated and were within the control limits.

Contract Required Detection Limit (CRDL) Analyses – Inorganic Analyses

The instrument calibration near the Contract Required Detection Limit (CRDL) must be verified for each analyte reported. An ICP standard solution at the CRDL (CRI) is evaluated against the control limits provided.

The CRI analysis results were evaluated for all samples and were within the control limits.

Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra (if applicable) were evaluated according to identification criteria established by the methods. The samples identified in Table 1 were reviewed. The organic compounds reported adhered to the specified identification criteria.

The reported quantitation results and detection limits were checked to ensure results reported were accurate. The samples identified in Table 1 were reviewed. No discrepancies were found between the raw data and the sample results reported by the laboratory.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of one (1) field blank (rinsate) sample, two (2) trip blank samples and one (1) field duplicate sample.

Field Blank Samples

To assess the efficiency of field decontamination procedures and cleanliness of sample containers, the rinsate sample identified in Table 1 was collected and analyzed.

The samples that should be qualified due to rinsate blank contamination are summarized in Table 10. No additional targeted analytes were reported as detected in the rinsate samples.

Trip Blank Samples

To monitor potential cross-contamination of VOC during sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler containing multiple samples.

The samples that should be qualified due to trip blank contamination are summarized in Table 11. No additional target analytes were reported as detected in the trip blank samples.

Field Duplicate Samples

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample set. The RPDs associated with these duplicate samples must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the RL, the evaluation criteria is one times the RL value for water samples.

The data indicate that an adequate level of precision was achieved for the sampling event.

System Performance

System performance between various quality control checks was evaluated to monitor for changes that may have caused the degradation of data quality. No technical problems or chromatographic anomalies were observed which would require qualification of the data.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted with the exception of the following:

- Several VOC compounds were rejected in a number of samples due to initial and continuing calibration violations;
- SVOC data were rejected in one sample due to a low internal standard area count.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

Sample Identification	Location	Matrix	QC Samples	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameter						
						TCL VOC	TCL SVOC	TCL PCB	TAL Metals	LL Mercury	Hex Chromium	Cyanide (total)
CRA SDC No. 56	CAS Work Order No. K120218											
WG-56393-020612-JV-037	MW-101S	water	MS-P	2/6/2012	3:10:00 PM	X	X	X	X	X	X	X
WG-56393-020612-JV-038	MW-101D	water	MS-P	2/6/2012	1:20:00 PM	X	X	X	X	X	X	X
WG-56393-020612-JV-039	MW-102S	water		2/6/2012	10:45:00 AM	X	X	X	X	X	X	X
WG-56393-020612-JV-040	MW-102D	water		2/6/2012	11:05:00 AM	X	X	X	X	X	X	X
WG-56393-020612-JV-041	MW-109D	water		2/6/2012	1:59:00 PM	X	X	X	X	X	X	X
WG-56393-020612-JV-042	Field Blank	water	Field Blank	2/6/2012	3:40:00 PM	X	X	X	X	X	X	X
WG-56393-020712-JV-043	MW-103D	water		2/7/2012	9:10:00 AM	X	X	X	X	X	X	X
WG-56393-020712-JV-044	MW-103D	water	DUP (-043)	2/7/2012	9:25:00 AM	X	X	X	X	X	X	X
WG-56393-020712-JV-045	MW-104S	water	MS/MSD-P	2/7/2012	9:35:00 AM	X	X	X	X	X	X	X
WG-56393-020712-JV-046	MW-104D	water		2/7/2012	9:50:00 AM	X	X	X	X	X	X	X
WG-56393-020712-JV-047	MW-105S	water		2/7/2012	12:05:00 PM	X	X	X	X	X	X	X
WG-56393-020712-JV-048	MW-105D	water		2/7/2012	12:32:00 PM	X	X	X	X	X	X	X
WG-56393-020712-JV-049	MW-106S	water		2/7/2012	2:00:00 PM	X	X	X	X	X	X	X
WG-56393-020712-JV-050	MW-106D	water		2/7/2012	2:22:00 PM	X	X	X	X	X	X	X
WG-56393-020812-JV-051	MW-107S	water		2/8/2012	11:52:00 AM	X	X	X	X	X	X	X
WG-56393-020812-JV-052	MW-108S	water		2/8/2012	10:00:00 AM	X	X	X	X	X	X	X
WG-56393-020812-JV-053	MW-108D	water	MS/MSD	2/8/2012	9:23:00 AM	X	X	X	X	X	X	X
TB-56393-020812-JV-054	Trip Blank	water	Trip Blank	2/6/2012	-					X		
TB-56393-020812-JV-055	Trip Blank	water	Trip Blank	2/6/2012	-	X						

Notes:

- DUP - Field Duplicate of sample indicated in parentheses
- Hex - Hexavalent
- LL- - Low Level
- MS/MSD - Matrix Spike/Matrix Spike Duplicate - Organics
- MS/MSD-P - Matrix Spike/Matrix Spike Duplicate - Organics(Partial parameters)
- MS-P - Matrix Spike (Partial parameters)
- PCB - Polychlorinated biphenyls
- QC - Quality Control
- SVOC - Semivolatile Organic Compounds
- TAL - Target Analyte List
- TCL - Target Compound List
- VOC - Volatile Organic Compounds

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Method</i> ¹	<i>Matrix</i>	<i>Holding Time</i>	<i>Preservation</i>
TCL VOC	SW-846 8260	Water	- 14 days from sample collection to completion of analysis.	pH < 2 and Iced, 4 ± 2° C
TCL SVOC	SW-846 8270	Water	- 7 days from sample collection to extraction - 40 days from extraction to completion of analysis	Iced, 4 ± 2° C
PCB	SW-846 8082	Water	- 7 days from sample collection to extraction - 40 days from extraction to completion of analysis	Iced, 4 ± 2° C
TAL Metals		Water	- 180 days from sample collection to completion of analysis	pH < 2 and Iced, 4 ± 2° C
Aluminum	EPA-WW 200.8/SW-846 6020			
Antimony	EPA-WW 200.8/SW-846 6020			
Arsenic	EPA-WW 200.8/SW-846 6020			
Barium	EPA-WW 200.8/SW-846 6020			
Beryllium	EPA-WW 200.8/SW-846 6020			
Cadmium	EPA-WW 200.8/SW-846 6020			
Chromium	EPA-WW 200.8/SW-846 6020			
Cobalt	EPA-WW 200.8/SW-846 6020			
Copper	EPA-WW 200.8/SW-846 6020			
Iron	SW-846 6010B			
Lead	EPA-WW 200.8/SW-846 6020			
Magnesium	SW-846 6010B			
Manganese	EPA-WW 200.8/SW-846 6020			
Nickel	EPA-WW 200.8/SW-846 6020			
Selenium	EPA-WW 200.8/SW-846 6020			
Silver	EPA-WW 200.8/SW-846 6020			
Sodium	SW-846 6010B			
Thallium	EPA-WW 200.8/SW-846 6020			
Vanadium	EPA-WW 200.8/SW-846 6020			
Zinc	EPA-WW 200.8/SW-846 6020			
LL-Mercury	EPA 1631	Water	- 28 days from sample collection to completion of analysis	pH < 2 and Iced, 4 ± 2° C

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Method</i> ¹	<i>Matrix</i>	<i>Holding Time</i>	<i>Preservation</i>
General Chemistry				
Hexavalent Chromium	SW-846 7196	Water	- 24 hours from sample collection to completion of analysis.	Iced, 4 ± 2° C
Cyanide (Total)	SW-846 9012	Water	- 14 days from sample collection to analysis	pH > 12 and Iced, 4 ± 2° C

Notes

¹ Method References:

EPA 1631, Revision E "Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry" USEPA Office of Water (EPA-821-R-02-019) August 2002.

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

TAL - Target Analyte List

TCL - Target Compound List

LL - Low Level

VOC - Volatile Organic Compounds

PCB - Polychlorinated biphenyls

SVOC - Semivolatile Organic Compounds

TABLE 3

SUMMARY OF QUALIFIED SAMPLE RESULTS DUE TO VIOLATION OF HOLDING TIME PERIOD
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Holding Time</i>	<i>Holding Time Criteria</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
General Chemistry	Hexavalent Chromium	72 hours	24 hours	WG-56393-020612-JV-042	2.0 UJ	µg/l
		48 hours	24 hours	WG-56393-020712-JV-044	2.0 UJ	µg/l
		72 hours	24 hours	WG-56393-020612-JV-037	2.0 UJ	µg/l
		72 hours	24 hours	WG-56393-020612-JV-038	2.0 UJ	µg/l
		72 hours	24 hours	WG-56393-020612-JV-039	2.0 UJ	µg/l
		72 hours	24 hours	WG-56393-020612-JV-040	2.0 UJ	µg/l
		72 hours	24 hours	WG-56393-020612-JV-041	2.0 UJ	µg/l
		48 hours	24 hours	WG-56393-020712-JV-043	2.0 UJ	µg/l
		48 hours	24 hours	WG-56393-020712-JV-045	2.0 UJ	µg/l
		48 hours	24 hours	WG-56393-020712-JV-046	2.0 UJ	µg/l
		48 hours	24 hours	WG-56393-020712-JV-047	2.0 UJ	µg/l
		48 hours	24 hours	WG-56393-020712-JV-048	2.0 UJ	µg/l
		48 hours	24 hours	WG-56393-020712-JV-049	2.0 UJ	µg/l
		48 hours	24 hours	WG-56393-020712-JV-050	2.0 UJ	µg/l
		25 hours	24 hours	WG-56393-020812-JV-052	2.0 UJ	µg/l
		25 hours	24 hours	WG-56393-020812-JV-053	2.0 UJ	µg/l

Notes:

UJ - Non-detect with an Estimated Report Limit

TABLE 4

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO VIOLATION OF INITIAL CALIBRATION ACCEPTANCE CRITERIA
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Calibration Date</i>	<i>RRF</i>	<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL VOC	Acetone	02/02/12	0.03	WG-56393-020612-JV-037	R	µg/l
				WG-56393-020612-JV-038	R	µg/l
				WG-56393-020612-JV-039	R	µg/l
				WG-56393-020612-JV-040	R	µg/l
				WG-56393-020612-JV-041	R	µg/l
				WG-56393-020612-JV-042	R	µg/l
				WG-56393-020712-JV-043	R	µg/l
				WG-56393-020712-JV-044	R	µg/l
				WG-56393-020712-JV-045	R	µg/l
				WG-56393-020712-JV-046	R	µg/l
				WG-56393-020712-JV-047	R	µg/l
				WG-56393-020712-JV-048	R	µg/l
				WG-56393-020712-JV-049	R	µg/l
				WG-56393-020712-JV-050	R	µg/l
				WG-56393-020812-JV-051	R	µg/l
				WG-56393-020812-JV-052	R	µg/l
				WG-56393-020812-JV-053	R	µg/l
				TB-56393-020812-JV-055	4 J	µg/l
TCL VOC	2-butanone	02/02/12	0.012	WG-56393-020612-JV-037	R	µg/l
				WG-56393-020612-JV-038	R	µg/l
				WG-56393-020612-JV-039	R	µg/l
				WG-56393-020612-JV-040	R	µg/l
				WG-56393-020612-JV-041	R	µg/l
				WG-56393-020612-JV-042	R	µg/l
				WG-56393-020712-JV-043	R	µg/l
				WG-56393-020712-JV-044	R	µg/l
				WG-56393-020712-JV-045	R	µg/l
				WG-56393-020712-JV-046	R	µg/l
				WG-56393-020712-JV-047	R	µg/l
				WG-56393-020712-JV-048	R	µg/l
				WG-56393-020712-JV-049	R	µg/l
				WG-56393-020712-JV-050	R	µg/l
				WG-56393-020812-JV-051	R	µg/l
				WG-56393-020812-JV-052	R	µg/l

TABLE 4

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO VIOLATION OF INITIAL CALIBRATION ACCEPTANCE CRITERIA
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Calibration Date</i>	<i>RRF</i>	<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL VOC	2-butanone (continued)	02/02/12	0.012	WG-56393-020812-JV-053	R	µg/l
				TB-56393-020812-JV-055	R	µg/l
TCL VOC	4-methyl-2-pentanone	02/02/12	0.017	WG-56393-020612-JV-037	R	µg/l
				WG-56393-020612-JV-038	R	µg/l
				WG-56393-020612-JV-039	R	µg/l
				WG-56393-020612-JV-040	R	µg/l
				WG-56393-020612-JV-041	R	µg/l
				WG-56393-020612-JV-042	R	µg/l
				WG-56393-020712-JV-043	R	µg/l
				WG-56393-020712-JV-044	R	µg/l
				WG-56393-020712-JV-045	R	µg/l
				WG-56393-020712-JV-046	R	µg/l
				WG-56393-020712-JV-047	R	µg/l
				WG-56393-020712-JV-048	R	µg/l
				WG-56393-020712-JV-049	R	µg/l
				WG-56393-020712-JV-050	R	µg/l
				WG-56393-020812-JV-051	R	µg/l
				WG-56393-020812-JV-052	R	µg/l
				WG-56393-020812-JV-053	R	µg/l
				TB-56393-020812-JV-055	R	µg/l

Notes:

J - Estimated Concentration

R - Rejected

RRF - Relative Response Factor

TCL - Target Compound List

VOC - Volatile Organic Compounds

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO VIOLATION OF CONTINUING CALIBRATION REQUIREMENTS
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Calibration Date</i>	<i>RRF</i>	<i>% D</i>	<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL VOC	Acetone	02/10/12	0.03	----	WG-56393-020612-JV-037	R	µg/l
					WG-56393-020612-JV-038	R	µg/l
					WG-56393-020612-JV-039	R	µg/l
					WG-56393-020612-JV-040	R	µg/l
					WG-56393-020612-JV-041	R	µg/l
					WG-56393-020612-JV-042	R	µg/l
					WG-56393-020712-JV-043	R	µg/l
					WG-56393-020712-JV-044	R	µg/l
					WG-56393-020712-JV-045	R	µg/l
					WG-56393-020712-JV-046	R	µg/l
					WG-56393-020712-JV-047	R	µg/l
					WG-56393-020712-JV-048	R	µg/l
					WG-56393-020712-JV-049	R	µg/l
					TB-56393-020812-JV-055	4 J	µg/l
TCL VOC	2-Butanone	02/10/12	0.013	—	WG-56393-020612-JV-037	R	µg/l
					WG-56393-020612-JV-038	R	µg/l
					WG-56393-020612-JV-039	R	µg/l
					WG-56393-020612-JV-040	R	µg/l
					WG-56393-020612-JV-041	R	µg/l
					WG-56393-020612-JV-042	R	µg/l
					WG-56393-020712-JV-043	R	µg/l
					WG-56393-020712-JV-044	R	µg/l
					WG-56393-020712-JV-045	R	µg/l
					WG-56393-020712-JV-046	R	µg/l
					WG-56393-020712-JV-047	R	µg/l
					WG-56393-020712-JV-048	R	µg/l
					WG-56393-020712-JV-049	R	µg/l
					TB-56393-020812-JV-055	R	µg/l

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO VIOLATION OF CONTINUING CALIBRATION REQUIREMENTS
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Calibration Date</i>	<i>RRF</i>	<i>% D</i>	<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL VOC	4-methyl-2-pentanone	02/10/12	0.018	---	WG-56393-020612-JV-037	R	µg/l
					WG-56393-020612-JV-038	R	µg/l
					WG-56393-020612-JV-039	R	µg/l
					WG-56393-020612-JV-041	R	µg/l
					WG-56393-020612-JV-042	R	µg/l
					WG-56393-020712-JV-043	R	µg/l
					WG-56393-020712-JV-044	R	µg/l
					WG-56393-020712-JV-045	R	µg/l
					WG-56393-020712-JV-046	R	µg/l
					WG-56393-020712-JV-047	R	µg/l
					WG-56393-020712-JV-048	R	µg/l
					WG-56393-020712-JV-049	R	µg/l
					TB-56393-020812-JV-055	R	µg/l
TCL VOC	Acetone	02/13/12	0.027	---	WG-56393-020612-JV-040	R	µg/l
TCL VOC	2-Butanone	02/13/12	0.012	---	WG-56393-020612-JV-040	R	µg/l
TCL VOC	4-methyl-2-pentanone	02/13/12	0.016	---	WG-56393-020612-JV-040	R	µg/l
TCL VOC	Acetone	02/14/12	0.027	---	WG-56393-020712-JV-050	R	µg/l
					WG-56393-020812-JV-051	R	µg/l
					WG-56393-020812-JV-052	R	µg/l
					WG-56393-020812-JV-053	R	µg/l
TCL VOC	2-Butanone	02/14/12	0.012	---	WG-56393-020712-JV-050	R	µg/l
					WG-56393-020812-JV-051	R	µg/l
					WG-56393-020812-JV-052	R	µg/l
					WG-56393-020812-JV-053	R	µg/l

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO VIOLATION OF CONTINUING CALIBRATION REQUIREMENTS
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Calibration Date</i>	<i>RRF</i>	<i>% D</i>	<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL VOC	4-methyl-2-pentanone	02/14/12	0.017	---	WG-56393-020712-JV-050	R	µg/l
					WG-56393-020812-JV-051	R	µg/l
					WG-56393-020812-JV-052	R	µg/l
					WG-56393-020812-JV-053	R	µg/l

Notes:

J - Estimated Concentration
R - Rejected

%D - Percent Difference
RRF - Relative Response Factor
TCL - Target Compound List
VOC - Volatile Organic Compounds

TABLE 6

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO METHOD BLANK CONTAMINATION
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Analysis Date</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TAL Metals	Iron	2/22/2012	7.1	WG-56393-020612-JV-040	20 U	ug/L
				WG-56393-020612-JV-041	20 U	ug/L
				WG-56393-020712-JV-043	20 U	ug/L
				WG-56393-020712-JV-044	20 U	ug/L
				WG-56393-020712-JV-046	20 U	ug/L
				WG-56393-020712-JV-050	20 U	ug/L
TAL Metals	Antimony	2/14/2012	0.006	WG-56393-020612-JV-037	0.050 U	ug/l
				WG-56393-020612-JV-038	0.050 U	ug/l
				WG-56393-020612-JV-040	0.050 U	ug/l
				WG-56393-020612-JV-041	0.050 U	ug/l
				WG-56393-020712-JV-043	0.050 U	ug/l
				WG-56393-020712-JV-044	0.050 U	ug/l
				WG-56393-020712-JV-045	0.050 U	ug/l
				WG-56393-020712-JV-046	0.050 U	ug/l
				WG-56393-020712-JV-047	0.050 U	ug/l
				WG-56393-020712-JV-048	0.050 U	ug/l
TAL Metals	Vanadium	2/14/2012	0.016	WG-56393-020612-JV-039	0.200 U	ug/L
				WG-56393-020612-JV-041	0.200 U	ug/L
				WG-56393-020712-JV-047	0.200 U	ug/L
				WG-56393-020812-JV-052	0.200 U	ug/L
				WG-56393-020812-JV-053	0.200 U	ug/L
TCL VOC	Chloroform	2/13/2012	0.11	WG-56393-020612-JV-040	0.50 U	ug/L

TABLE 6

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO METHOD BLANK CONTAMINATION
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Analysis Date</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL SVOC	Butyl benzylphthalate	2/20/12	0.028	WG-56393-020612-JV-038	0.20 U	ug/L
				WG-56393-020612-JV-039	0.20 U	ug/L
				WG-56393-020612-JV-040	0.20 U	ug/L
				WG-56393-020612-JV-041	0.20 U	ug/L
				WG-56393-020712-JV-043	0.20 U	ug/L
				WG-56393-020712-JV-045	0.20 U	ug/L
				WG-56393-020712-JV-046	0.20 U	ug/L
				WG-56393-020712-JV-050	0.20 U	ug/L
				WG-56393-020812-JV-051	0.20 U	ug/L
				WG-56393-020812-JV-053	0.20 U	ug/L
TCL SVOC	Dimethyl phthalate	2/20/12	0.023	WG-56393-020712-JV-046	0.20 U	ug/L
				WG-56393-020712-JV-048	0.20 U	ug/L
				WG-56393-020712-JV-049	0.20 U	ug/L
				WG-56393-020812-JV-051	0.20 U	ug/L
				WG-56393-020812-JV-053	0.20 U	ug/L
TCL SVOC	Di-n-butylphthalate	2/20/12	0.032	WG-56393-020612-JV-037	0.20 U	ug/L
				WG-56393-020612-JV-038	0.20 U	ug/L
				WG-56393-020612-JV-039	0.20 U	ug/L
				WG-56393-020612-JV-040	0.20 U	ug/L
				WG-56393-020612-JV-041	0.20 U	ug/L
				WG-56393-020712-JV-043	0.20 U	ug/L
				WG-56393-020712-JV-045	0.20 U	ug/L
				WG-56393-020712-JV-046	0.20 U	ug/L
				WG-56393-020712-JV-047	0.20 U	ug/L
				WG-56393-020712-JV-048	0.20 U	ug/L
				WG-56393-020712-JV-050	0.20 U	ug/L
				WG-56393-020812-JV-051	0.20 U	ug/L
				WG-56393-020812-JV-053	0.20 U	ug/L

TABLE 6

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO METHOD BLANK CONTAMINATION
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Analysis Date</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL SVOC	Diethyl phthalate	2/20/2012	0.017	WG-56393-020612-JV-037	0.20 U	ug/L
				WG-56393-020612-JV-038	0.20 U	ug/L
				WG-56393-020612-JV-039	0.20 U	ug/L
				WG-56393-020612-JV-040	0.20 U	ug/L
				WG-56393-020612-JV-041	0.20 U	ug/L
				WG-56393-020712-JV-043	0.20 U	ug/L
				WG-56393-020712-JV-044	0.20 U	ug/L
				WG-56393-020712-JV-045	0.20 U	ug/L
				WG-56393-020712-JV-046	0.20 U	ug/L
				WG-56393-020712-JV-047	0.20 U	ug/L
				WG-56393-020712-JV-048	0.20 U	ug/L
				WG-56393-020712-JV-049	0.20 U	ug/L
				WG-56393-020712-JV-050	0.20 U	ug/L
				WG-56393-020812-JV-051	0.20 U	ug/L
				WG-56393-020812-JV-052	0.20 U	ug/L
				WG-56393-020812-JV-053	0.20 U	ug/L

Notes:

U - Qualified as Not Detected at the report limit

SVOC - Semivolatile Organic Compounds

TAL - Target Analyte List

TCL - Target Compound List

VOC - Volatile Organic Compounds

TABLE 7

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO CALIBRATION VERIFICATION BLANK CONTAMINATION
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Analysis Date</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TAL Metals	Antimony	2/14/12	0.028	WG-56393-020812-JV-052	0.05 U	ug/L
				WG-56393-020812-JV-053	0.05 U	ug/L
TAL Metals	Thallium	2/14/12	0.0030	WG-56393-020612-JV-037	0.0200 U	ug/L
				WG-56393-020612-JV-038	0.0200 U	ug/L
TAL Metals	Thallium	2/14/12	0.0043	WG-56393-020612-JV-039	0.0200 U	ug/L
				WG-56393-020612-JV-040	0.0200 U	ug/L
				WG-56393-020612-JV-041	0.0200 U	ug/L
				WG-56393-020712-JV-043	0.0200 U	ug/L
				WG-56393-020712-JV-044	0.0200 U	ug/L
				WG-56393-020712-JV-045	0.0200 U	ug/L
				WG-56393-020712-JV-046	0.0200 U	ug/L
				WG-56393-020712-JV-047	0.0200 U	ug/L
				WG-56393-020712-JV-049	0.0200 U	ug/L
				WG-56393-020712-JV-050	0.0200 U	ug/L
				WG-56393-020812-JV-052	0.0200 U	ug/L
TAL Metals	Vanadium	2/14/12	0.0044	WG-56393-020712-JV-043	0.0200 U	ug/L
				WG-56393-020712-JV-044	0.0200 U	ug/L
				WG-56393-020712-JV-045	0.0200 U	ug/L
				WG-56393-020712-JV-046	0.0200 U	ug/L
				WG-56393-020712-JV-048	0.0200 U	ug/L
				WG-56393-020712-JV-049	0.0200 U	ug/L
				WG-56393-020712-JV-050	0.0200 U	ug/L
TAL Metals	Lead	2/14/12	0.004	WG-56393-020712-JV-044	0.020 U	ug/L
				WG-56393-020712-JV-049	0.020 U	ug/L
				WG-56393-020712-JV-050	0.020 U	ug/L
				WG-56393-020812-JV-051	0.020 U	ug/L
				WG-56393-020812-JV-053	0.020 U	ug/L

Notes:

U - Qualified as Not Detected at the report limit
TAL - Target Analyte List

TABLE 8

SUMMARY OF QUALIFIED SAMPLE RESULTS DUE TO OUTLYING
 LABORATORY CONTROL SAMPLE RESULTS
 GROUNDWATER MONITORING - FEBRUARY 2012
 12TH STREET LANDFILL
 OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>LCS Date</i>	<i>LCS %Rec</i>	<i>Control Limits %Rec</i>	<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL VOC	Methylene Chloride	02/10/12	125	71-122	TB-56393-020812-JV-055	0.18 J	µg/L

Notes:

- J - Estimated Quantity
- LCS - Laboratory Control Spike
- %Rec - Percent Recovery
- TCL - Target Compound List
- VOC - Volatile Organic Compounds

TABLE 9
 QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INTERNAL STANDARD (IS) RECOVERIES
 GROUNDWATER MONITORING - FEBRUARY 2012
 12TH STREET LANDFILL
 OTSEGO TOWNSHIP, MICHIGAN

Parameter	Sample ID	IS	IS Area Count	Control Limits	Analytes	Qualified Sample Results	Units
TCL SVOC	WG-56393-020712-JV-049	Perylene-d12	5%	50-150%	Benzo(a)pyrene	R	ug/l
					Benzo(b)fluoranthene	R	ug/l
					Benzo(g,h,i)perylene	R	ug/l
					Di-n-octyl phthalate	R	ug/l
					Dibenz(a,h)anthracene	R	ug/l
					Benzo(k)fluoranthene	R	ug/l
					Indeno(1,2,3-cd)pyrene	R	ug/l

Notes:

R - Rejected

TCL - Target Compound List

SVOC - Semivolatile Organic Compounds

TABLE 10

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO RINSE BLANK CONTAMINATION
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Blank ID</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TAL Metals	Aluminum	WG-56393-020612-JV-042	1.7	WG-56393-020612-JV-037	7.0 U	ug/l
				WG-56393-020612-JV-040	3.5 U	ug/l
				WG-56393-020612-JV-039	3.8 U	ug/l
				WG-56393-020612-JV-041	2.0 U	ug/l
TAL Metals	Antimony	WG-56393-020612-JV-042	0.008 J	WG-56393-020612-JV-037	0.050 U	ug/l
				WG-56393-020612-JV-038	0.050 U	ug/l
				WG-56393-020612-JV-039	0.050 U	ug/l
				WG-56393-020612-JV-040	0.050 U	ug/l
				WG-56393-020612-JV-041	0.050 U	ug/l
TAL Metals	Arsenic	WG-56393-020612-JV-042	0.03 J	WG-56393-020612-JV-037	0.50 U	ug/l
				WG-56393-020612-JV-038	0.50 U	ug/l
				WG-56393-020612-JV-039	0.50 U	ug/l
				WG-56393-020612-JV-040	0.50 U	ug/l
				WG-56393-020612-JV-041	0.50 U	ug/l
TAL Metals	Chromium	WG-56393-020612-JV-042	0.20 J	WG-56393-020612-JV-037	0.20 U	ug/l
				WG-56393-020612-JV-038	0.26 U	ug/l
				WG-56393-020612-JV-039	0.20 U	ug/l
				WG-56393-020612-JV-040	0.20 U	ug/l
				WG-56393-020612-JV-041	0.20 U	ug/l
TAL Metals	Iron	WG-56393-020612-JV-042	4.2 J	WG-56393-020612-JV-040	20 U	ug/l
				WG-56393-020612-JV-041	20 U	ug/l
TAL Metals	Lead	WG-56393-020612-JV-042	0.011 J	WG-56393-020612-JV-039	0.020 U	ug/l
				WG-56393-020612-JV-040	0.048 U	ug/l
				WG-56393-020612-JV-041	0.020 U	ug/l
TAL Metals	Mercury	WG-56393-020612-JV-042	8.93	WG-56393-020612-JV-037	3.27 U	ug/l
				WG-56393-020712-JV-049	4.47 U	ug/l

TABLE 10

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO RINSE BLANK CONTAMINATION
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Blank ID</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TAL Metals	Nickel	WG-56393-020612-JV-042	0.15 J	WG-56393-020612-JV-037	0.24 U	ug/l
				WG-56393-020612-JV-038	0.57 U	ug/l
				WG-56393-020612-JV-039	0.49 U	ug/l
				WG-56393-020612-JV-040	0.20 U	ug/l
				WG-56393-020612-JV-041	0.20 U	ug/l
TAL Metals	Vanadium	WG-56393-020612-JV-042	0.091 J	WG-56393-020612-JV-037	0.200 U	ug/L
				WG-56393-020612-JV-038	0.211 U	ug/L
				WG-56393-020612-JV-039	0.200 U	ug/L
				WG-56393-020612-JV-040	0.200 U	ug/L
				WG-56393-020612-JV-041	0.200 U	ug/L
TAL Metals	Zinc	WG-56393-020612-JV-042	0.21 J	WG-56393-020612-JV-037	0.94 U	ug/l
				WG-56393-020612-JV-039	0.50 U	ug/l
				WG-56393-020612-JV-040	0.67 U	ug/l
				WG-56393-020612-JV-041	0.50 U	ug/l
TCL SVOC	Di-n-butylphthalate	WG-56393-020612-JV-042	0.032 J	WG-56393-020612-JV-037	0.20 U	ug/l
				WG-56393-020612-JV-038	0.20 U	ug/l
				WG-56393-020612-JV-039	0.20 U	ug/l
				WG-56393-020612-JV-040	0.20 U	ug/l
				WG-56393-020612-JV-041	0.20 U	ug/l
TCL SVOC	Diethyl phthalate	WG-56393-020612-JV-042	0.021 J	WG-56393-020612-JV-037	0.20 U	ug/l
				WG-56393-020612-JV-038	0.20 U	ug/l
				WG-56393-020612-JV-039	0.20 U	ug/l
				WG-56393-020612-JV-040	0.20 U	ug/l
				WG-56393-020612-JV-041	0.20 U	ug/l
TCL SVOC	Naphthalene	WG-56393-020612-JV-042	0.037 J	WG-56393-020612-JV-039	0.20 U	ug/L
				WG-56393-020612-JV-040	0.20 U	ug/L
				WG-56393-020612-JV-041	0.20 U	ug/L

TABLE 10

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO RINSE BLANK CONTAMINATION
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Blank ID</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL VOC	Chloroform	WG-56393-020612-JV-042	0.59	WG-56393-020612-JV-040	0.50 U	ug/L
				WG-56393-020712-JV-043	0.50 U	ug/L
				WG-56393-020712-JV-044	0.50 U	ug/L
				WG-56393-020712-JV-048	0.50 U	ug/L

Notes:

U -Qualified as Not Detected at the limit indicated

TAL - Target Analyte List

TCL - Target Compound List

SVOC - Semivolatile Organic Compounds

VOC - Volatile Organic Compounds

TABLE 11

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO TRIP BLANK CONTAMINATION
GROUNDWATER MONITORING - FEBRUARY 2012
12TH STREET LANDFILL
OTSEGO TOWNSHIP, MICHIGAN

<i>Parameter</i>	<i>Analyte</i>	<i>Trip Blank Sample ID</i>	<i>Blank Result</i>	<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TAL Metals	Mercury	TB-56393-020812-JV-054	0.54	WG-56393-020612-JV-038	1.57 U	ng/L
				WG-56393-020612-JV-039	1.11 U	ng/L
				WG-56393-020612-JV-040	1.0 U	ng/L
				WG-56393-020612-JV-041	1.0 U	ng/L
				WG-56393-020712-JV-043	1.0 U	ng/L
				WG-56393-020712-JV-044	1.0 U	ng/L
				WG-56393-020712-JV-045	1.0 U	ng/L
				WG-56393-020712-JV-046	1.0 U	ng/L
				WG-56393-020712-JV-047	1.0 U	ng/L
				WG-56393-020712-JV-048	1.0 U	ng/L
				WG-56393-020712-JV-050	1.0 U	ng/L
				WG-56393-020812-JV-051	1.0 U	ng/L
				WG-56393-020812-JV-052	1.0 U	ng/L
				WG-56393-020812-JV-053	1.0 U	ng/L

Notes:

U -Qualified as Not Detected at the limit indicated

TAL -Target Analyte List